

### **REMARKS**

The Office Action dated April 26, 2006, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-21 are currently pending, of which claims 1, 7, 13, and 16 are independent claims. Claims 1-21 are respectfully submitted for consideration.

#### **Rejections under 35 U.S.C. 102(e)**

Claims 1-21 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,453,358 of Michels et al. ("Michels"). Applicants respectfully traverse this rejection, because the claims recite subject matter that is neither disclosed nor suggested in the cited art and because Michels is not proper prior art.

Claim 1, upon which claims 2-6 depend, is directed to a table search device. The device includes a table having a plurality of entries. The device also includes a cache having a subset of entries of the plurality of entries of the table. The device further includes a search engine configured to first search the cache in a first number of search cycles and then search the table in a second number of search cycles based on search results of the cache. The search engine is connected to the table and the cache.

Claim 7, upon which claims 8-12 depend, is directed to a table search system. The table search system includes a table means for storing a plurality of entries. The table search system also includes a cache for storing a subset of entries of the plurality of

entries of the table means. The table search system further includes a search engine means for initially search the cache means in a first number of search cycles and then searching the table means in a second number of search cycles based on search results of the cache means.

Claim 13, upon which claims 14-15 depend, is directed to a method for performing a table lookup. The method includes creating a table having a plurality of entries. The method also includes creating a cache having a subset of entries of the plurality of entries of the table. The method further includes searching, by a search engine, the cache in a first number of search cycles. The method additionally includes searching, by the search engine, the table in a second number of search cycles based on search results of the cache.

Claim 16, upon which claims 17-21 depend, is directed to a network switch. The network switch includes an ARL table having a plurality of entries. The network switch also includes an ARL cache having a subset of entries of the plurality of entries of the ARL table. The network switch further includes a search engine configured to first search the ARL cache in a first number of search cycles and then search the ARL table in a second number of search cycles based on search results of the ARL cache. The search engine is connected to the ARL table and the ARL cache.

It is respectfully submitted that Michels does not disclose or suggest all of the elements of any of the presently pending claims.

Michels is directed to a network switching device with concurrent key lookups. The switching device includes multiple binary search engines coupled in series including one or more precursor search engines, and a final stage binary search engine.

Michels describes that it uses pipelining, which is defined as connecting search engines in series. Michels asserts that by pipelining search engines, increased throughput can be achieved. Michels posits that it is another aspect of Michels' invention to permit each of the search engines to perform concurrent source and destination searches of the lookup table.

Claim 1 recites, in part, "a search engine configured to first search the cache in a first number of search cycles and then search the table in a second number of search cycles based on search results of the cache," claim 7 recites, in part, "search engine means for initially search the cache means in a first number of search cycles and then searching the table means in a second number of search cycles based on search results of the cache means," claim 13 recites, in part, "searching, by the search engine, the table in a second number of search cycles based on search results of the cache," and claim 16 recites, in part, "a search engine configured to first search the ARL cache in a first number of search cycles and then search the ARL table in a second number of search cycles based on search results of the ARL cache." Michels does not teach at least these features of the present invention.

The Office Action cited Michels Figure 3 as showing these recitations. Although, Figure 3 of Michels depicts two search engines, neither of those two engines both

searches the cache and searches the table based on search results of the cache. However, the claims of present application recite a search engine that performs both searches. Accordingly, Michels does not have a feature that corresponds to the claimed search engine. Thus, Michels does not teach at least these features of claims 1- 21.

The Office Action responded that it is considering “two binary search engines ... as a search device.” Applicant respectfully submits that the claim does not recite “a search device,” but “a search engine.” It is respectfully submitted that it is important for the Office Action to address the actual recitation, because it is the recitations that define the scope of the claims. It is irrelevant whether Michels’ two search engines are a “search device,” because that is not what is claimed.

However, even if the two binary search engines are considered the search engine recited in the claims (not admitted), the disclosure of two binary search engines fails to disclose or suggest, at least, “a search engine configured to first search the cache in a first number of search cycles and then search the table in a second number of search cycles based on search results of the cache” as recited by claim 1, “search engine means for initially search the cache means in a first number of search cycles and then searching the table means in a second number of search cycles based on search results of the cache means” as recited by claim 7, “searching, by the search engine, the table in a second number of search cycles based on search results of the cache” as recited by claim 13, and “a search engine configured to first search the ARL cache in a first number of search cycles and then search the ARL table in a second number of search cycles based on

search results of the ARL cache” as recited by claim 16. This is because Michels does not treat the two binary search engines as one, and therefore does not describe them as being configured to function as one as the claim describes.

With regard to claims 3, 5, 9, 11, 14, 18, and 20 the Office Action argued that Michels inherently discloses that the first number of search cycles is less than the second number of search cycles. Applicants respectfully traverse this assertion as discussed below.

With regard to claims 4, 6, 10, 12, 15, 19, and 21 the Office Action argued that Michels discloses that the first search engine performs the first eight iterations of the search and that the second binary search engine performs the last eight iterations. The Office Action cited Michels, column 6, lines 2-5 as disclosing that “the first number of search cycles used to search the cache is equal to the second number of search cycles used to search the table.” Applicants respectfully submit that the Office Action cannot argue contrary positions. Assuming the Office Action did not make two mistakes (not admitted), either, as the Office Action asserted with regard to claims 3, 5, 9, 11, 14, 18, and 20, the first number of search cycles is inherently less than the second number of search cycles, or the number of search cycles is equal as the Office Action asserted with regard to claims 4, 6, 10, 12, 15, 19, and 21. Appropriate clarification and/or withdrawal of the rejection is respectfully requested.

### **Michels Is Not Proper Prior Art**

Moreover, it is respectfully submitted that Michels is not proper prior art under 35 U.S.C. 102(e) because only those U.S. patents that were filed in the U.S. before the invention by the Applicants are potential prior art under 35 U.S.C. 102(e). Michels has a filing date of September 6, 2000. The present application is entitled to an effective filing date of August 20, 1999, by virtue of its claim to the priority of 09/528,164, filed August 20, 1999. Accordingly, Michels does not qualify as prior art under 35 U.S.C. 102(e) against the claims of the present application.

The USPTO has taken a broad position, namely that the 35 U.S.C. 102(e) date of a cited reference is the earliest U.S. effective filing date to which the subject matter would be entitled priority. Applicants observe that Michels asserted a chain of priority extending back to U.S. Patent Application No. 60/072,280 filed January 23, 1998. At first, this might seem to indicate that the subject matter disclosed in Michels is entitled to that earlier filing date for 35 U.S.C. 102(e) under the USPTO's interpretation.

Applicants, however, have construed the rejection as relying only the actual filing date of Michels, and accordingly, Michels is not proper prior art because the present application is entitled to earlier priority even under the USPTO's interpretation.

The reason Applicants have so construed the rejection is that 37 CFR 1.104 requires that "the examiner must cite the best references at his or her command." Applicants note that Michels gives the patent number for the patents that issued from the earlier patent application in the chain of priority. That reference, if it taught the same

thing, would be a better reference because it would be earlier. Accordingly, Applicants understand the rejection as following the “best reference” rule, and implicitly acknowledging that the earlier applications did not contain the cited subject matter.

As MPEP 2136.03 explains, “Portions of the patent application which were canceled are not part of the patent or application publication and thus cannot be relied on in a 35 U.S.C. 102(e) rejection over the issued patent or application publication.” *See also, Ex parte Stalego*, 154 USPQ 52 (Bd. App. 1966). Likewise, subject matter that is disclosed in a parent application, but not included in the child continuation-in-part (CIP) cannot be relied on in a 35 U.S.C. 102(e) rejection over the issued or published CIP. *In re Lund*, 376 F.2d 982, 153 USPQ 625 (CCPA 1967). By the same rationale, if the earlier applications did not disclose the subject matter, a later application cannot be used as a reference under 35 U.S.C. 102(e) as of that earlier date.

Thus, it is respectfully submitted that Michels cannot be entitled to earlier priority than its actual filing date of September 6, 2000, for the subject matter that the Office Action cited. Therefore, it is respectfully requested that this rejection be withdrawn.

If, however, the Office Action is relying on Michels having an earlier filing date than the present application, it is respectfully requested that the Office Action particularly point out where the subject matter is disclosed in the previous applications, in order to establish that the subject matter disclosed by Michels is entitled to an earlier filing date.

Regardless of whether Michels is proper prior art, the claims recite subject matter that is neither disclosed nor suggested by Michels, as discussed above as a courtesy to the Examiner.

### **Conclusion**


For the reasons explained above, it is respectfully submitted that each of claims 1-21 recite subject matter that is neither disclosed nor suggested in the cited art, and that the cited reference, Michels is not prior art under 35 U.S.C. 102(e). It is therefore respectfully requested that claims 1-21 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.



In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
Peter Flanagan  
Registration No. 58,178

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

PCF:kmp